

BEST MANAGEMENT PRACTICES: SNOWY PLOVERS

Best Management Practices for Western Snowy Plovers for Beach Maintenance and Use of Heavy Machinery

Regulations to Protect Western Snowy Plovers

The Western snowy plover was listed as federally threatened along the entire Pacific Coast in 1993, and it is also a California Bird Species of Special Concern.



Adult with chick.
Art: S. Vigallon

The snowy plover is protected by the Federal Endangered Species Act (ESA) and the Migratory Bird Treaty Act. Section 9 of the ESA prohibits “take” of any federally listed endangered or threatened species, or destruction of the nest, eggs or chicks. “Take” is “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” “Harass” is “intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior, including breeding, feeding, or sheltering.” US Fish and Wildlife Service (USFWS) regulations (50 CFR 17.3) define “harm” as to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavior, such as breeding, feeding or sheltering.

The snowy plover is a California Bird Species of Special Concern, and its protection is a high priority. Snowy plovers, nests and nest scrapes, eggs, and chicks are protected by California Fish and Game Code 3503. Impacts to the species must be considered in any evaluation for California Environmental Quality Act (CEQA) documents. The California Code of Regulations, Title 14, Ch.1, Section 251.1 (CA Code T14. C1. S251.1) states, "no person shall harass, herd or drive any game or nongame bird or mammal or furbearing mammal. For the purposes of this section, harass is defined as an intentional act which disrupts an animal's normal behavior patterns, which includes, but is not limited to, breeding, feeding or sheltering."

Threats to Western Snowy Plovers

Millions of people visit southern California beaches annually, for fitness, to sunbathe, swim, walk the dog, and for organized sports. Activities of beach management and recreation within occupied snowy plover habitat during the breeding season can result in death and injury of adults, chicks, and eggs. Activities year-round can result in death and injury of adults and immature snowy plovers while feeding and sheltering. Public recreational uses including youth summer camps, sporting and cultural events, large scale special events, and regular use by beach visitors can degrade snowy plover habitat. This may destroy eggs, kill chicks, juveniles, or adults, cause abandonment of nests, displace adults and juveniles, or decrease energy reserves needed by the birds for reproduction, migration, and survival.

Domestic cats and dogs are predators to native wildlife. Humans also may aid native predators, especially the American crow, by providing food in refuse, bird feeders, and outdoor pet food. Food-related trash increases exposure of snowy plover eggs, chicks, and adults to predation. Leashed and off-leash pets cause injury and death by crushing or eating eggs and chicks and chasing chicks and adult snowy plovers.

Unpermitted beach uses, such as unauthorized camping and fires can also degrade habitat with direct impacts to snowy plovers, eggs and chicks. Nocturnal disturbance and removal of

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driftwood, wooden signs or stakes that delineate nesting areas for use in illegal fires can cause abandonment of nests and displace adults and juveniles.

BMPs FOR BEACH MANAGEMENT: SPECIAL PROTECTION ZONES (SPZs) TO MINIMIZE LIKELIHOOD OF “TAKE” OF SNOWY PLOVERS

The USFWS classifies portions of beaches in each of the Counties of Southern California as habitat critical for the survival of the snowy plover. Critical habitat includes both overwintering habitat and breeding habitat. Snowy plovers may nest on open beaches between Baja California and Washington State. Recovery goals are to protect plovers and increase the population to 500 breeding individuals.

The USFWS recommends agencies develop a Habitat Conservation Plan (HCP) to permit beach management and recreational management activities that have the potential to result in “Take” as defined above. They recommended identifying Special Protection Zones (SPZ) to manage for snowy plovers until an HCP is developed. SPZs are habitat areas used consistently by snowy plovers for feeding and sheltering during the overwintering or non-breeding season. These should have a minimum 500-foot buffer from the central wintering roost location.

Since 2017, snowy plovers have been documented nesting in Los Angeles County after a 70-year absence, and in Orange County, after a 46-year absence. Snowy plovers also nest on beaches in Santa Barbara County, Ventura County, and San Diego County. However, some nests may escape detection, as they are simple “scrapes” on bare sand, and the eggs match the sand color.

The SPZs should include areas that snowy plovers consistently use during the breeding season as well as habitat for overwintering. We recommend SPZs have at least a 1,000-foot buffer from the center of nesting locations and a 500-foot buffer from the center of wintering roost locations. Protective measures should be in place year-round at known snowy plover breeding locations, and from July through April at known wintering roost locations, or better, year-round.

We recommend fences and interpretive signs to define all SPZs, as areas protected from foot, vehicle, and pet traffic. Symbolic fencing using posts and rope, or other barriers such as wooden slat fencing, should include educational signs. SPZs provide refuges where snowy plovers and other shorebirds can feed, rest, and potentially nest, with less disturbance along busy urban beaches. Fences in the SPZ should define a 300-foot-long rectangle parallel to the shoreline, or other configuration of similar size suitable for the beach. In SPZs where snowy plovers only are present during the wintering season, fencing should remain in place from July through the end of April. In SPZs used by snowy plovers for both wintering and breeding, we recommend fences remain in place year-round, but if erected only for the breeding season, fences should be in place from February 1 through August 31.

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Symbolic fencing with interpretive signage. Photo: S. Vigallon

Recreational Activities

1. In known snowy plover winter roosts, SPZs should be fenced during periods of high beach use from July to September, continuing to the end of April whenever possible, and year-round in known occupied breeding habitat.
2. Large-scale recreational activities such as triathlons, surf camps, beach volleyball camps, etc., should not be permitted within the SPZs or within 1,000 feet of occupied breeding habitat. Permits for these types of activities should identify set-up locations at least 1,000 feet away from SPZs. Trained snowy plover docents should be scheduled to visit camps near SPZs to discuss sharing the beach with snowy plovers.
3. Large concerts/raves/competitions with scaffolding, bleachers, and amplified sound should avoid SPZs with at least a 1,000-foot buffer and barriers to prevent attendees moving into the SPZ. Permits for these types of activities should identify set-up locations at least 1,000 feet away from SPZs.
4. No permits for large events should be issued for large events within 0.5 mile of occupied breeding habitat during the breeding season.
5. Existing dog regulations in and near the SPZs should be strictly enforced year-round. We recommend signs at beach entrances stating that dogs are not permitted, consistent enforcement, and public education.

Routine Operation of Vehicles and Heavy Machinery

Vehicles can cause disturbance that results in degradation of snowy plover habitat. Vehicle use on beaches includes support services, public safety and lifeguard patrols, water quality

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monitoring, erosion control, trash pick-up, mechanical sand raking or beach grooming, marine mammal stranding patrols, and construction of winter sand berms.

USFWS recommends no vehicles operating within SPZs, except for activities such as essential human safety patrols, trash pick-up, and other activities agreed as being essential by Wildlife Agencies. Note that snowy plovers may move about on other areas of the beach, outside of SPZs.

Sand Grooming

1. Regular sand grooming should not occur within SPZs or on their ocean side, with a minimum buffer of 50 feet on the other three sides. Crews trained in snowy plover observation may remove trash by hand in and around SPZs, leaving kelp, wrack, and woody materials on the beach to the greatest extent possible. When wrack is removed, the crustaceans and invertebrates within the wrack are also removed, reducing prey for foraging snowy plovers.
2. During the breeding season (March 1 to August 31), no vehicles should enter SPZs with known occupied breeding habitat.
3. If necessary, beach grooming adjacent to SPZs should be done in the presence of a qualified snowy plover monitor.
4. Beach grooming is not allowed on State Park managed property or U.S. Navy owned property, or some other beaches by agreement with local agencies. Instead, wrack is left in place and trash removed by hand. This practice is highly recommended.

Routine Operation of Essential Vehicles

1. SPZs should be visibly marked, so that vehicle operators are aware of their presence. We recommend signs be installed at vehicle entrances to beaches, and within 100 feet of each end of the SPZ, and that drivers have maps of SPZ locations.
2. Operators should avoid driving through SPZs, except when absolutely necessary for work, if alternate routes around the SPZ are unavailable. Situations where limited vehicle operation may be necessary include essential patrols if driving higher on the beach decreases visibility, and emergency response actions.
3. Drivers should remain under 10 mph on the beach. Near an SPZ, speed should decrease to 5 mph. If a flock of snowy plovers is encountered, the driver should back up and drive around the flock, allowing at least 100 feet separation between the vehicle and the birds.
4. During the breeding season, March 1 to August 31, before any activities are conducted within an SPZ, trained individuals should survey the SPZ for snowy plovers and nests.
5. All beach drivers should receive annual Western Snowy Plover Awareness Training.

Western Snowy Plover Awareness Training

All operators of vehicles on beaches should be required to attend annual beach driving training. This training should include a short instructional tutorial that demonstrates safe driving techniques on beaches with sensitive wildlife, along with a description of the appearance and biology of the snowy plover, its habitat and life history, and its legal status. Personnel should sign a statement that they viewed and understood the training.

The USFWS representative can provide resources online and in-person for beach driving training and discuss how to develop an internal training program. The USFWS representative can provide

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the most recent maps and information on snowy plovers and/or their occupied breeding, feeding, and sheltering habitat.

BMPs for Other Projects that Use Vehicles or Heavy Machinery on Sandy Beaches

Occasional other projects may be proposed on sandy beaches including infrastructure protection, ensuring safe navigation within channels, beach nourishment, and mechanical removal of large amounts of trash and non-naturally occurring debris following large storm events.

We recommend that beach managers incorporate avoidance and minimization measures into projects, with or without a Federal nexus, as part of their planning.

If a project or proposed action will be funded, authorized, or carried out by a Federal agency, and may have either beneficial or adverse effects on listed species or designated critical habitat, the Federal agency must consult with the USFWS, pursuant to section 7(a)(2) of the ESA. Projects such as dredging for safe channel/harbor navigation, beach nourishment, and maintaining river and outlet channels often have a Federal nexus that requires consultation. If the proposed project does not involve a Federal agency, but may result in the “take” of a listed species, the project proponent should still apply to the USFWS for an incidental take permit.

Agencies should contact their USFWS representative¹ to obtain the most recent maps and information on snowy plovers and their occupied breeding, feeding, and sheltering habitat. This will help the agency and the USFWS to identify whether the project may potentially impact snowy plovers or their habitat. The USFWS will coordinate with the agency to provide site-specific minimization and avoidance measures.



Snowy plovers may roost in tire tracks and footprints on the beach. Photo: R. Jeffers

¹ Carlsbad Fish and Wildlife Office, 760-431-9440. Please request to talk with or leave a message for the Division Supervisor for your county, who can direct your call to the appropriate biologist.